IN THE DRAWINGS

Kindly amend FIG. 1 to include reference numeral 40 as shown in the annexed replacement FIG. 1.

REMARKS

Submitted herewith are a "replacement sheet" showing FIG. 1 and an "annotated sheet showing changes" to FIG. 1. The drawing has been corrected to clearly identify the hydraulic loads as an indirect power secondary load 40. As shown in the drawing, the direct loads 38 receive electrical power directly from the engines 16 whereas the indirect loads 40 receive power from the engines 16 indirectly via one of the direct loads 38. Paragraph 21 of the specification has been amended to clarify this. No new matter has been added.

The Examiner has maintained his rejection of the claims (1-20) under 35 U.S.C. § 103 (a) as being unpatentable over Soucy (6,476,510) and Lacy (6,510,369).

The claims recite a secondary electrical load power management system for an aircraft that includes multiple secondary electrical loads, an aircraft flight condition sensor, and a controller. The controller determines engine secondary power extraction and the current operating conditions of the aircraft. An engine secondary power extraction limit is determined in response to the current operating conditions. The secondary electrical loads are operated in response to the engine secondary power extraction limit and the engine secondary power extraction.

In general "secondary loads" refer to loads that are not used for flight or maneuvering of an aircraft. Secondary loads, for example, may include a fuel pump, a hydraulic pump, a hydraulic load, an electric generator and electrical devices that receive power from that generator, and other known aircraft secondary loads. On the other hand, "primary loads" refer, in general, to the aircraft engines and devices included therewith, such as turbines, high-pressure shafts, compressors, and throttles.

The claimed invention allows an aircraft to be designed to include direct power secondary electrical loads that have a combined rated total power consumption level that is greater than that of rated maximum secondary power extraction of an aircraft engine. Thus, the claimed invention allows an engine to supply an increased amount of electrical power and satisfy electrical power consumption requirements for an increased number of secondary electrical loads during certain operating conditions.

Soucy is relied on as teaching the following items: a power management system having a generator, a load, an engine speed sensor, and a fuel supply controller and governor. Applicants submit that the assertion of Soucy having the stated items is irrelevant. Most modem aircraft have the stated items. A majority of the stated items as such are mentioned in the background section of the present application.

Examiner admits that Soucy fails to teach how the controller controls the system to work efficiently. The point is that Soucy fails to teach or suggest the limitations of determining engine secondary power extraction of an aircraft, determining a engine secondary power extraction limit in response to current operating conditions of the aircraft, and operating secondary electrical loads in response to the engine secondary power extraction limit and the engine secondary power extraction. Soucy simply measures power demanded and power supplied and adjusts the power supplied to meet the power demanded. Soucy provides nothing with respect to power management between primary and secondary loads, and especially not as claimed.

The Examiner relies on Lacy for teaching the control claimed. Applicants submit that not only does Lacy not teach or suggest the control claimed, but that Lacy is nonanalogous art and is not a reasonable prior art reference.

Lacy discloses a residential electrical system for controlling the electrical supply to residential homes. The residential system includes a fuel cell system that supplies electricity to residential homes having controlled loads and uncontrolled loads. The controlled loads refer to appliances that can be disconnected via a load sense and switch circuit, and uncontrolled loads refer to appliances that can only be disconnected via circuit breakers in a house. The electrical system regulates the electrical connections of the load sense and switch circuits to prevent the residential electrical loads from exceeding a power threshold. The control circuit of Lacy monitors the output power of the fuel cell system to all of the residential loads including the controlled and uncontrolled loads. Based on that output power, the control circuit regulates the controlled loads.

The system of Lacy does not make any distinction between which loads are of primary or higher importance. Lacy simply controls the loads that can be regulated via the load sense and switch circuits. Although Lacy discloses determining the power demand from specific controlled loads, this information is used to determine priority of which controlled load is to be deactivated. The loads that demand more power are deactivated first. Lacy does not determine the combined power demand of the controlled loads nor is a power limit set on the controlled loads as a group. Clearly Lacy's residential system is completely unrelated and operates in a substantially different manner than the system and methods claimed.

The function and purpose of the system of Lacy are also clearly different than that of Soucy and the present invention. Lacy would not have logically commended itself to the inventors' attention in considering the problems solved by the system and methods as claimed.

In developing an aircraft secondary electric load controlling system and similar methods thereof, one would clearly not look to a residential electrical system for controlling the amount of power demanded from a fuel cell subsystem. Activating and deactivating controlled appliances to limit the power output of a fuel cell subsystem in a residential setting is substantially different and unrelated to managing power between primary and secondary loads of an aircraft. In the aircraft setting one is maintaining power to the primary loads while limiting power to the secondary loads to maintain flight and maneuverability of the aircraft. In the residential setting one is simply preventing an overload situation on a fuel cell subsystem. Lacy would not be reasonably pertinent to the particular problems solved by the claimed invention. Thus, the Applicants submit that Lacy is nonanalogous art and to use such a reference is improper and far-reaching at best.

Consideration of the instant amendment when the Request for Continued Examination is taken up for examination is respectfully requested.

Respectfully Submitted
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Date

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ANNOTATED SHEET SHOWING CHANGES
(10/604,189)

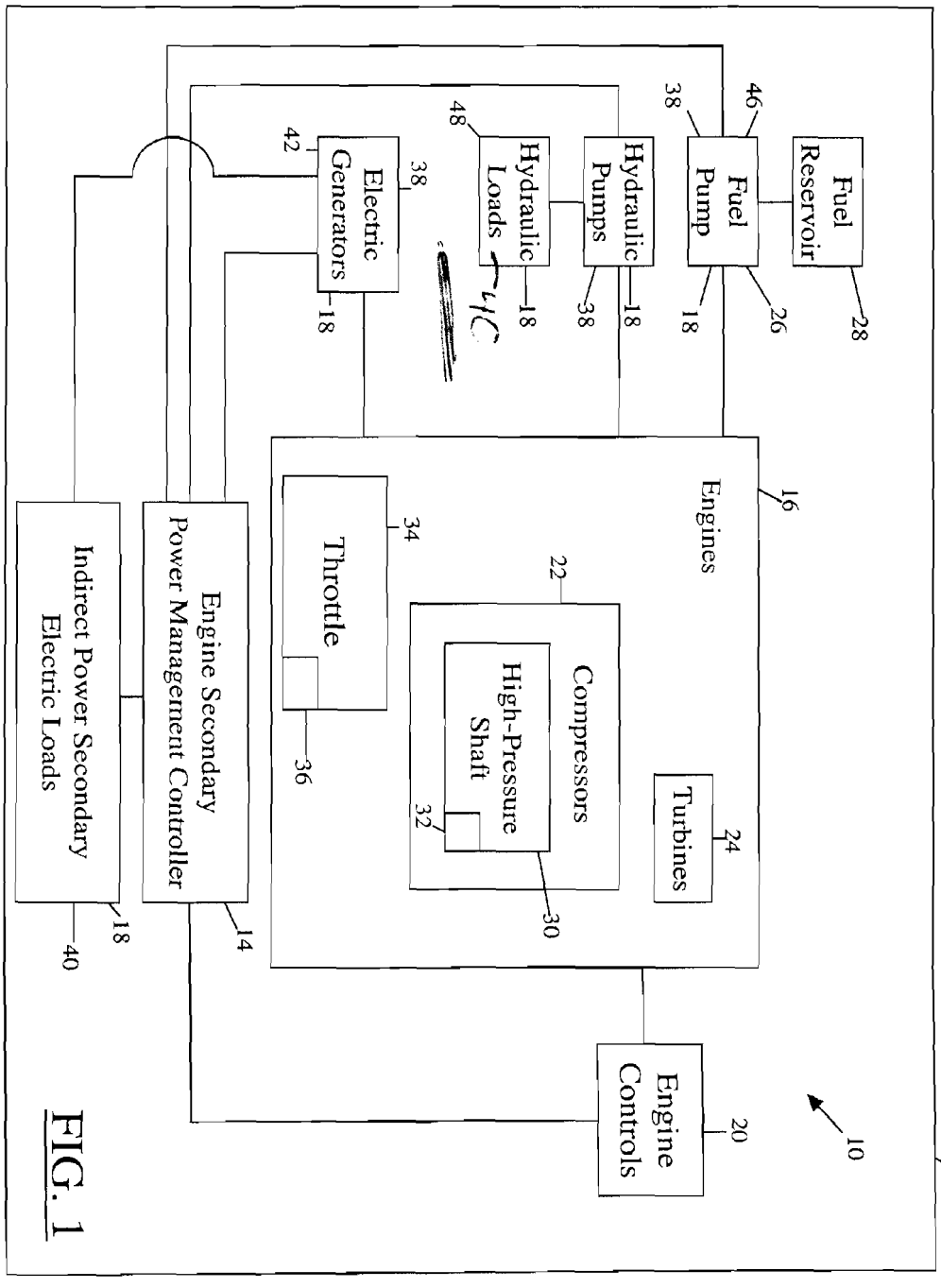

FIG. 1